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(54) **SYSTEM AND METHOD FOR LOW-COST, HIGH-EFFICIENCY SOLAR PANEL POWER FEED**

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CPC ***H01L 31/02021*** (2013.01); *Y02E 10/50* (2013.01); *Y10T 307/549* (2015.04); *Y10T 307/609* (2015.04)

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See application file for complete search history.

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(57) **ABSTRACT**

A cascading regulation system connected to a number of serially connected power sources and uses multiple regulators having different cutoff voltages to provide an output for the local power consumption unit. Each of the regulators is connected to a subset of serially connected power sources and so configured that if the voltage generated at the lowest tap is no longer sufficient for a stable supply to the local power consumption unit, the next higher regulator takes over, and the output voltage drops in small steps reflective of that takeover of the next higher tap. When the voltage generated across a subsection grows, a lower connected tap may take over again, producing a slightly higher output voltage for the local power consumption unit. The cutover steps are chosen such that the output voltage range matches the range given as the acceptable input range for the local power consumption unit.

18 Claims, 53 Drawing Sheets